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0315



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## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/082,014

DATE: 03/13/2002 P.5

TIME: 15:15:02

Input Set : A:\ICC130.ST25.txt

Output Set: N:\CRF3\03132002\J082014.raw

#2

3 <110> APPLICANT: Birkett, Ashley J.  
 5 <120> TITLE OF INVENTION: IMMUNOGENIC Hbc CHIMER PARTICLES STABILIZED WITH AN N-  
 TERMINAL CYSTEINE

7 <130> FILE REFERENCE: ICC-130.0 4564/85124  
 C--> 9 <140> CURRENT APPLICATION NUMBER: US/10/082,014  
 C--> 10 <141> CURRENT FILING DATE: 2002-02-22

12 <150> PRIOR APPLICATION NUMBER: 09/930,915  
 13 <151> PRIOR FILING DATE: 2001-08-15  
 15 <160> NUMBER OF SEQ ID NOS: 290  
 17 <170> SOFTWARE: PatentIn version 3.1

19 <210> SEQ ID NO: 1  
 20 <211> LENGTH: 183  
 21 <212> TYPE: PRT  
 22 <213> ORGANISM: Hepatitis B virus  
 24 <400> SEQUENCE: 1

26 Met Asp Ile Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu  
 27 1 5 10 15  
 30 Ser Phe Leu Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp  
 31 20 25 30  
 34 Thr Ala Ser Ala Leu Tyr Arg Glu Ala Leu Glu Ser Pro Glu His Cys  
 35 35 40 45  
 38 Ser Pro His His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Glu  
 39 50 55 60  
 42 Leu Met Thr Leu Ala Thr Trp Val Gly Val Asn Leu Glu Asp Pro Ala  
 43 65 70 75 80  
 46 Ser Arg Asp Leu Val Val Ser Tyr Val Asn Thr Asn Met Gly Leu Lys  
 47 85 90 95  
 50 Phe Arg Gln Leu Leu Trp Phe His Ile Ser Cys Leu Thr Phe Gly Arg  
 51 100 105 110  
 54 Glu Thr Val Ile Glu Tyr Leu Val Ser Phe Gly Val Trp Ile Arg Thr  
 55 115 120 125  
 58 Pro Pro Ala Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro  
 59 130 135 140  
 62 Glu Thr Thr Val Val Arg Arg Arg Gly Arg Ser Pro Arg Arg Arg Thr  
 63 145 150 155 160  
 66 Pro Ser Pro Arg Arg Arg Arg Ser Gln Ser Pro Arg Arg Arg Arg Ser  
 67 165 170 175  
 70 Gln Ser Arg Glu Ser Gln Cys  
 71 180

74 <210> SEQ ID NO: 2  
 75 <211> LENGTH: 185  
 76 <212> TYPE: PRT  
 77 <213> ORGANISM: Hepatitis B virus  
 79 <400> SEQUENCE: 2

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Input Set : A:\ICC130.ST25.txt

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```

81 Met Asp Ile Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu
82 1          5          10          15
85 Ser Phe Leu Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp
86          20          25          30
89 Thr Ala Ser Ala Leu Tyr Arg Glu Ala Leu Glu Ser Pro Glu His Cys
90          35          40          45
93 Ser Pro His His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Glu
94          50          55          60
97 Leu Met Thr Leu Ala Thr Trp Val Gly Asn Asn Leu Gln Asp Pro Ala
98 65          70          75          80
101 Ser Arg Asp Leu Val Val Asn Tyr Val Asn Thr Asn Met Gly Leu Lys
102          85          90          95
105 Ile Arg Gln Leu Leu Trp Phe His Ile Ser Cys Leu Thr Phe Gly Arg
106          100          105          110
109 Glu Thr Val Leu Glu Tyr Leu Val Ser Phe Gly Val Trp Ile Arg Thr
110          115          120          125
113 Pro Pro Ala Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro
114          130          135          140
117 Glu Thr Thr Val Val Arg Arg Arg Asp Arg Gly Arg Ser Pro Arg Arg
118 145          150          155          160
121 Arg Thr Pro Ser Pro Arg Arg Arg Arg Ser Gln Ser Pro Arg Arg Arg
122          165          170          175
125 Arg Ser Gln Ser Arg Glu Ser Gln Cys
126          180          185
129 <210> SEQ ID NO: 3
130 <211> LENGTH: 185
131 <212> TYPE: PRT
132 <213> ORGANISM: Hepatitis B virus
134 <400> SEQUENCE: 3
136 Met Asp Ile Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu
137 1          5          10          15
140 Ser Phe Leu Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp
141          20          25          30
144 Thr Ala Ser Ala Leu Tyr Arg Glu Ala Leu Glu Ser Pro Glu His Cys
145          35          40          45
148 Ser Pro His His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Glu
149          50          55          60
152 Leu Met Thr Leu Ala Thr Trp Val Gly Asn Asn Leu Glu Asp Pro Ala
153 65          70          75          80
156 Ser Arg Asp Leu Val Val Asn Tyr Val Asn Thr Asn Val Gly Leu Lys
157          85          90          95
160 Ile Arg Gln Leu Leu Trp Phe His Ile Ser Cys Leu Thr Phe Gly Arg
161          100          105          110
164 Glu Thr Val Leu Glu Tyr Leu Val Ser Phe Gly Val Trp Ile Arg Thr
165          115          120          125
168 Pro Pro Ala Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro
169          130          135          140
172 Glu Thr Thr Val Val Arg Arg Arg Asp Arg Gly Arg Ser Pro Arg Arg
173 145          150          155          160

```

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Input Set : A:\ICC130.ST25.txt

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176 Arg Thr Pro Ser Pro Arg Arg Arg Pro Ser Gln Ser Pro Arg Arg Arg
177          165          170          175
180 Arg Ser Gln Ser Arg Glu Ser Gln Cys
181          180          185
184 <210> SEQ ID NO: 4
185 <211> LENGTH: 183
186 <212> TYPE: PRT
187 <213> ORGANISM: Hepatitis B virus
189 <400> SEQUENCE: 4
191 Met Asp Ile Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu
192 1          5          10          15
195 Ser Phe Leu Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp
196          20          25          30
199 Thr Ala Ala Ala Leu Tyr Arg Asp Ala Leu Glu Ser Pro Glu His Cys
200          35          40          45
203 Ser Pro His His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Asp
204          50          55          60
207 Leu Met Thr Leu Ala Thr Trp Val Gly Thr Asn Leu Glu Asp Pro Ala
208 65          70          75          80
211 Ser Arg Asp Leu Val Ser Tyr Val Asn Thr Asn Val Gly Leu Lys
212          85          90          95
215 Phe Arg Gln Leu Leu Trp Phe His Ile Ser Cys Leu Thr Phe Gly Arg
216          100          105          110
219 Glu Thr Val Leu Glu Tyr Leu Val Ser Phe Gly Val Trp Ile Arg Thr
220          115          120          125
223 Pro Pro Ala Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro
224          130          135          140
227 Glu Thr Thr Val Val Arg Arg Arg Gly Arg Ser Pro Arg Arg Arg Thr
228 145          150          155          160
231 Pro Ser Pro Arg Arg Arg Arg Ser Gln Ser Pro Arg Arg Arg Arg Ser
232          165          170          175
235 Gln Ser Arg Glu Ser Gln Cys
236          180
239 <210> SEQ ID NO: 5
240 <211> LENGTH: 183
241 <212> TYPE: PRT
242 <213> ORGANISM: Marmota monax
244 <400> SEQUENCE: 5
246 Met Asp Ile Asp Pro Tyr Lys Glu Phe Gly Ser Ser Tyr Gln Leu Leu
247 1          5          10          15
250 Asn Phe Leu Pro Leu Asp Phe Phe Pro Asp Leu Asn Ala Leu Val Asp
251          20          25          30
254 Thr Ala Thr Ala Leu Tyr Glu Glu Glu Leu Thr Gly Arg Glu His Cys
255          35          40          45
258 Ser Pro His His Thr Ala Ile Arg Gln Ala Leu Val Cys Trp Asp Glu
259          50          55          60
262 Leu Thr Lys Leu Ile Ala Trp Met Ser Ser Asn Ile Thr Ser Glu Gln
263 65          70          75          80
266 Val Arg Thr Ile Ile Val Asn His Val Asn Asp Thr Trp Gly Leu Lys

```

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Input Set : A:\ICCL130.ST25.txt

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```

267      85      90      95
270 Val Arg Gln Ser Leu Trp Phe His Leu Ser Cys Leu Thr Phe Gly Gln
271      100      105      110
274 His Thr Val Gln Glu Phe Leu Val Ser Phe Gly Val Trp Ile Arg Thr
275      115      120      125
278 Pro Ala Pro Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro
279      130      135      140
282 Glu His Thr Val Ile Arg Arg Arg Gly Gly Ala Arg Ala Ser Arg Ser
283 145      150      155      160
286 Pro Arg Arg Arg Thr Pro Ser Pro Arg Arg Arg Arg Ser Gln Ser Pro
287      165      170      175
290 Arg Arg Arg Arg Ser Gln Cys
291      180
294 <210> SEQ ID NO: 6
295 <211> LENGTH: 217
296 <212> TYPE: PRT
297 <213> ORGANISM: Spermophilus variegatus
299 <400> SEQUENCE: 6
301 Met Tyr Leu Phe His Leu Cys Leu Val Phe Ala Cys Val Pro Cys Pro
302 1      5      10      15
305 Thr Val Gln Ala Ser Lys Leu Cys Leu Gly Trp Leu Trp Asp Met Asp
306      20      25      30
309 Ile Asp Pro Tyr Lys Glu Phe Gly Ser Ser Tyr Gln Leu Leu Asn Phe
310      35      40      45
313 Leu Pro Leu Asp Phe Phe Pro Asp Leu Asn Ala Leu Val Asp Thr Ala
314      50      55      60
317 Ala Ala Leu Tyr Glu Glu Glu Leu Thr Gly Arg Glu His Cys Ser Pro
318 65      70      75      80
321 His His Thr Ala Ile Arg Gln Ala Leu Val Cys Trp Glu Glu Leu Thr
322      85      90      95
325 Arg Leu Ile Thr Trp Met Ser Glu Asn Thr Thr Glu Glu Val Arg Arg
326      100      105      110
329 Ile Ile Val Asp His Val Asn Asn Thr Trp Gly Leu Lys Val Arg Gln
330      115      120      125
333 Thr Leu Trp Phe His Leu Ser Cys Leu Thr Phe Gly Gly His Thr Val
334      130      135      140
337 Gln Glu Phe Leu Val Ser Phe Gly Val Trp Ile Arg Thr Pro Ala Pro
338 145      150      155      160
341 Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro Glu His Thr
342      165      170      175
345 Val Ile Arg Arg Arg Gly Gly Ser Arg Ala Ala Arg Ser Pro Arg Arg
346      180      185      190
349 Arg Thr Pro Ser Pro Arg Arg Arg Arg Ser Gln Ser Pro Arg Arg Arg
350      195      200      205
353 Arg Ser Gln Ser Pro Ala Ser Asn Cys
354      210      215
357 <210> SEQ ID NO: 7
358 <211> LENGTH: 51
359 <212> TYPE: DNA

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## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/082,014

DATE: 03/13/2002

TIME: 15:15:03

Input Set : A:\ICCL130.ST25.txt

Output Set: N:\CRF3\03132002\J082014.raw

```

360 <213> ORGANISM: Artificial Sequence
362 <220> FEATURE:
363 <223> OTHER INFORMATION: plasmid pkk223
365 <400> SEQUENCE: 7
366 ttcacacagg aaacagaatt cccgggggatc cgtcgacctg cagccaagct t      51
369 <210> SEQ ID NO: 8
370 <211> LENGTH: 38
371 <212> TYPE: DNA
372 <213> ORGANISM: Artificial Sequence
374 <220> FEATURE:
375 <223> OTHER INFORMATION: plasmid pkk223
377 <400> SEQUENCE: 8
378 ttcacataag gaggaaaaaa ccatgggatc cgaagctt      38
381 <210> SEQ ID NO: 9
382 <211> LENGTH: 15
383 <212> TYPE: PRT
384 <213> ORGANISM: Streptococcus pneumoniae
386 <400> SEQUENCE: 9
388 Lys Leu Glu Glu Leu Ser Asp Lys Ile Asp Glu Leu Asp Ala Glu
389 1          5          10          15
392 <210> SEQ ID NO: 10
393 <211> LENGTH: 35
394 <212> TYPE: PRT
395 <213> ORGANISM: Streptococcus pneumoniae
397 <400> SEQUENCE: 10
399 Gln Lys Lys Tyr Asp Glu Asp Gln Lys Lys Thr Glu Glu Lys Ala Ala
400 1          5          10          15
403 Leu Glu Lys Ala Ala Ser Glu Glu Met Asp Lys Ala Val Ala Ala Val
404          20          25          30
407 Gln Gln Ala
408          35
411 <210> SEQ ID NO: 11
412 <211> LENGTH: 27
413 <212> TYPE: PRT
414 <213> ORGANISM: Cryptosporidium parvum
416 <400> SEQUENCE: 11
418 Gln Asp Lys Pro Ala Asp Ala Pro Ala Ala Glu Ala Pro Ala Ala Glu
419 1          5          10          15
422 Pro Ala Ala Gln Gln Asp Lys Pro Ala Asp Ala
423          20          25
426 <210> SEQ ID NO: 12
427 <211> LENGTH: 17
428 <212> TYPE: PRT
429 <213> ORGANISM: Human immunodeficiency virus
431 <400> SEQUENCE: 12
433 Arg Lys Arg Ile His Ile Gly Pro Gly Arg Ala Phe Tyr Ile Thr Lys
434 1          5          10          15
437 Asn
441 <210> SEQ ID NO: 13

```

→ Use of n and / or Xaa has been detected in the Sequence Listing. Review the Sequence Listing to ensure a corresponding explanation is present in the <220> to <223> fields of each sequence using n or Xaa.

**VERIFICATION SUMMARY**

PATENT APPLICATION: US/10/082,014

DATE: 03/13/2002

TIME: 15:15:04

Input Set : A:\ICC130.ST25.txt

Output Set: N:\CRF3\03132002\J082014.raw

L:9 M:270 C: Current Application Number differs, Replaced Current Application Number

L:10 M:271 C: Current Filing Date differs, Replaced Current Filing Date

L:863 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:32

L:867 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:32